CLAIMS

What is claimed is:

1. An apparatus for facilitating processing of a plurality of electronic components, comprising:

a frame member including frame alignment features configured for cooperative engagement with frame alignment elements projecting from a platform of a stereolithography apparatus;

a film suspended under tension within the frame member; and

an adhesive coating on the film, the adhesive coating formulated to exhibit adhesive characteristics reducible responsive to exposure to at least one selected wavelength of radiation.

2. The apparatus of claim 1, wherein the at least one selected wavelength of radiation falls within a range of wavelengths in the ultraviolet band of wavelengths.

3. An apparatus for fabrication of articles, comprising:

a stereolithography system structured for formation of material in at least a semisolid state in at least one layer to form a structure abutting a pre-existing workpiece located within a vision field above a platform of the stereolithography system, the platform having frame alignment elements projecting therefrom;

a machine vision system in operable communication with the stereolithography system including at least one camera oriented for detecting objects within the vision field;

a computer in operable communication with both the stereolithography system and the machine vision system, the computer being programmed to respond to input from the machine vision system indicative of the presence, location and orientation of at least one workpiece in the vision field and to initiate and control the stereolithography system to form at least one structure of at least one layer of a at least semisolid material abutting the at least one workpiece;

a frame member including frame alignment features cooperatively engaged with the frame alignment elements;

a film suspended under tension within the frame member; and

an adhesive coating on the film, the adhesive coating formulated to exhibit adhesive characteristics reducible responsive to exposure to at least one selected wavelength of radiation.

4. The apparatus of claim 3, wherein the at least one selected wavelength of radiation falls within a range of wavelengths in the ultraviolet band of wavelengths.

5. A method of processing electronic component assemblies, comprising:

disposing a plurality of electronic component assemblies in fixed positions secured to a platen assembly with one side of each of the electronic component assemblies including electronic components exposed through the platen assembly;

securing the platen assembly to a platform within a stereolithography apparatus with the exposed electronic components on the one side of each of the electronic component assemblies facing upward;

forming at least one stereolithographic structure adjacent each of the exposed electronic components on the one side of each of the electronic component assemblies; and

removing the platen assembly from the stereolithography apparatus.

6. The method of claim 5, wherein disposing a plurality of electronic component assemblies in fixed positions secured to the platen assembly with one side of each of the electronic component assemblies including electronic components exposed through the platen assembly further comprises disposing the plurality of electronic component assemblies in fixed positions secured to the platen assembly with another, opposing side of each of the electronic component assemblies including electronic components exposed through the platen assembly.

7. The method of claim 6, further including:

after forming at least one stereolithographic structure adjacent each of the exposed electronic components on the one side of each of the electronic component assemblies, inverting the platen assembly;

securing the inverted platen assembly to a platform within a stereolithography apparatus with the exposed electronic components on the another, opposing side of each of the electronic component assemblies facing upward; and

forming at least one stereolithographic structure adjacent each of the exposed electronic components on the another, opposing side of each of the electronic component assemblies.

8. The method of claim 7, wherein inverting the platen assembly is effected prior to removal thereof from the stereolithography apparatus.

9. The method of claim 7, wherein inverting the platen assembly is effected after the removal thereof from the stereolithography apparatus and securing the platen assembly to a platform within a stereolithography apparatus with the exposed electronic components on the another, opposing side of each of the electronic component assemblies facing upward comprises securing the platen assembly to a platform within a second stereolithography apparatus.

10. The method of claim 7, wherein inverting the platen assembly is effected after the removal thereof from the stereolithography apparatus and securing the platen assembly to a platform within a stereolithography apparatus with the exposed electronic components on the another, opposing side of each of the electronic component assemblies facing upward comprises securing the platen assembly to the platform within the same stereolithography apparatus.

11. A method of processing electronic components, comprising:

adhering a plurality of electronic components in fixed positions to one side of a film supported by a frame member;

securing the frame member to a platform within a stereolithography apparatus with the electronic components adhered to the one side of the film facing upward;

forming at least one stereolithographic structure adjacent each of the electronic components adhered to the one side of the film; and

removing the frame member from the stereolithography apparatus.

12. The method of claim 11, further comprising, after removing the frame member from the stereolithography apparatus, inverting the frame member and releasing the plurality of electronic components from the film.

13. The method of claim 12, wherein releasing the plurality of electronic components from the film comprises exposing the film to ultraviolet radiation from a side thereof opposite the one side to which the plurality of electronic components is adhered.

14. The method of claim 12, wherein releasing the plurality of electronic components from the film comprises releasing the plurality of electronic components into a tray divided into cells, each electronic component being released into a single cell.

15. The method of claim 14, further comprising forming at least one stereolithographic structure adjacent each of the electronic components while the electronic components are located in the cells of the tray.

16. The method of claim 14, further comprising placing structures to effect external electrical communication on each of the electronic components while the electronic components are located in the cells of the tray.

17. The method of claim 12, wherein releasing the plurality of electronic components from the film comprises adhering the plurality of electronic components to another film.

18. The method of claim 17, further comprising forming at least one stereolithographic structure adjacent each of the electronic components while the electronic components are adhered to the another film.

19. The method of claim 17, further comprising placing structures to effect external electrical communication on each of the electronic components while the electronic components are adhered to the another film.